

ABSTRACT OF THE DISCLOSURE

A process for producing an adhered SOI substrate without causing cracking and peeling of a single-crystal silicon thin film. The process consists of selectively forming a porous silicon layer in a single-crystal semiconductor substrate, adding hydrogen into the single-crystal semiconductor substrate to form a hydrogen-added layer, adhering the single-crystal semiconductor substrate to a supporting substrate, separating the single-crystal semiconductor substrate at the hydrogen-added layer by thermal annealing, performing thermal annealing again to stabilize the adhering interface, and selectively removing the porous silicon layer to give single-crystal silicon layer divided into islands.